List 1

c_0	Isentropic speed of sound, 343m/s
c_n	Phase speed of the nth duct mode, defined as $\frac{ic_0}{\sqrt{(n\pi / k_0 h)^2 - 1}}$ in where i is unit imaginary number
c_{nc}	Phase speed of the nth duct mode in the cavity
f	Frequency in Hz
$[f_1, f_2]$	Frequency range in which the transmission loss is everywhere equal to or higher than a criterion value TL_{cr}
h	Duct height
h_c	Cavity depth
H	Heavside function $H(x-x')=0$ when $x<x'$; $H(x-x')=1$ when $x>x'$
I_j	Modal coefficient of incident wave
j	Vibration mode where j=1,2,3....
k_n	Modal wavenumber, defined as ω/c_n
k_{nc}	Modal wavenumber of the medium in the cavity
k_0	Real wavenumber, defined as $k_0 = \omega / c_0$
l	Vibration mode where l=1,2,3,...
L	Length of membrane
L_v	Cavity length
m	Membrane-to-air mass ratio or the ratio of the structural mass to the fluid mass
p_i	Incident wave

p_r	Reflected wave, **Equation 6**
p_{+rad}	Radiation pressure acting on the upper surface of the membrane, **Equation 1**
p_{-rad}	Radiation pressure acting on the lower surface of the membrane facing the cavity, **Equation 2**
p_{-ref}	Reflection of the radiated waves into the cavity by the two vertical walls of the cavity, **Equation 3**
p_t	Transmitted wave, **Equation 7**
T	Dimensionless axial tensile force, $T = \dfrac{T^*}{h^* \rho_o^* (c_o^*)^2}$
TL	Transmission loss
TL_{cr}	Criterion value of transmission loss
T_{opt}	Optimal tensile force for maximum f_2/f_1
V	Vibration velocity of the membrane
V_j	Vibration amplitude of the jth *in-vacuo* mode
x, y	Cartesian coordinates
x', y'	Cartesian coordinate for the sound source
x_c, y_c	Cartesian coordinates in the region of cavity where the relevant duct acoustics scale is h_c, **Equation 2 & 3**
x_c', y_c'	Cartesian coordinate for the sound source in the region of cavity where the relevant duct acoustics scale is h_c, **Equation 2 & 3**
Z_{ji}	Modal impedance, ith modal coefficient of fluid loading caused by a prescribed jth vibration of unit amplitude, **Equation 4**

Greek symbols

δ_{0n}	Kronecker delta: $\delta_{0n} = 0$ for $n \neq 0$, and $\delta_{0n} = 1$ when $n = 0$.
ρ_0	Fluid density, for air it's 1.225 kg/m^3
ξ	Local dimensionless variable defined as $\xi = x/L + 1/2$

ξ'	Dimensionless source coordinate defined as $\xi' = x'/L + 1/2$
ψ_n	Duct acoustics mode defined as $\psi_n(y) = \sqrt{2-\delta_{0n}}\cos(n\pi y)$, Eq. (12)
ω	Angular frequency $\omega = 2\pi f$
L_j	Linear structural operator for the jth mode which is defined as $mi\omega + \frac{T}{i\omega}\left(\frac{j\pi}{L}\right)^2$, $j = 1, 2, 3, \ldots$

Symbols with asterisks are dimensional quantities that are normalized to become dimensionless quantities by the equation following **Equation 3**.